

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re the Application of :  
Govind RAO :  
Divisional Application of :  
Serial No.: 09/928,662 :  
Filed: December 12, 2003 :  
For: BIOREACTOR AND BIOPROCESSING TECHNIQUE

**INFORMATION DISCLOSURE STATEMENT**

U.S. Patent and Trademark Office  
2011 South Clark Place  
Customer Window, Mail Stop Non-Fee Amendment  
Crystal Plaza Two, Lobby, Room 1B03  
Arlington, VA 22202

Sir:

Pursuant to 37 C.F.R. 1.56, the attention of the Patent and Trademark Office is hereby directed to the reference(s) listed on the attached PTO-1449. One copy of each reference is attached. It is respectfully requested that the information be expressly considered during the prosecution of this application, and that the reference(s) be made of record therein and appear among the "References Cited" on any patent to issue therefrom.

Applicants have listed publication dates on the attached PTO-1449 based on information presently available to the undersigned. However, the listed publication dates should not be construed as an admission that the information was actually published on the indicated date. Applicant reserves the right to establish the patentability of the claimed invention over any of the information provided herewith, and/or to prove that this information may not be prior art, and/or to prove that this information may not be enabling for the teachings purportedly offered. This statement should not be construed as a representation that a search has been made, that information cited in the statement is considered to be and/or is material to patentability, or that information more material to the examination of the present patent application does not exist. The Examiner is specifically requested not to rely solely on the material submitted herewith. It is further understood that the Examiner will consider information that was cited or submitted to the U.S. Patent and Trademark Office in a prior application relied on under 35 U.S.C. §120. 1138 OG 37, 38 (May 19, 1992).

- 1. This Information Disclosure Statement is being filed (i) within three months of the U.S. filing date of a U.S. application other than a CPA continued prosecution application under '1.53(d) OR (ii) within three months of the date of entry of the national stage as set forth in '1.491 in an international application OR (iii) before the mailing date of a first Office Action on the merits. No certification or fee is required. 37 C.F.R. §1.97(b).
- 2. This Information Disclosure Statement is being filed more than three months after the U.S. filing date AND after the mailing date of the first Office Action on the merits, but before

Divisional Application of  
Application No. 09/928,662  
Attorney Docket No. UMBC-0004A

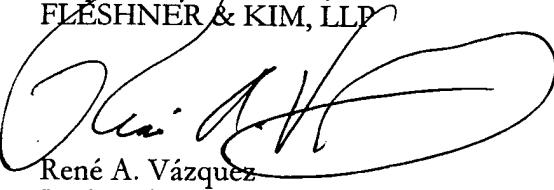
the mailing date of a Final Rejection OR Notice of Allowance OR an action that otherwise closes prosecution in the application. 37 C.F.R. §1.97(c).

- - a. I hereby state that each item of information contained in this Information Disclosure Statement was first cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. 1.97(e)(1).
  - b. I hereby state that no item of information in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application and, to my knowledge after making reasonable inquiry, was known to any individual designated in 37 C.F.R. 1.56(c) more than three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. 1.97(e)(2).
  - c. Attached is our check no. \_\_\_\_\_ in the amount of \$180.00 in payment of the fee under 37 C.F.R. 1.17(p). Please credit or debit Deposit Account No. 16-0607 as needed to ensure consideration of the disclosed information. Two duplicate copies of this paper are attached.
- - 3. This Information Disclosure Statement is being filed after the mailing date of a Final Rejection OR Notice of Allowance OR an action that otherwise closes prosecution in the application, but on or before payment of the Issue Fee. Attached is our check no. \_\_\_\_\_ in the amount of \$180.00 in payment of the fee under 37 C.F.R. 1.17(p). Please credit or debit Deposit Account No. 16-0607 as needed to ensure consideration of the disclosed information. Two duplicate copies of this paper are attached. 37 C.F.R. 1.97(d).
- - a. I hereby state that each item of information contained in this Information Disclosure Statement was first cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. 1.97(e)(1).
  - b. I hereby state that no item of information in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application or, to my knowledge after making reasonable inquiry, was known to any individual designated in 37 C.F.R. §1.56(c) more than three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. 1.97(e)(2).
- X 4. Others: Copies of the references were cited by or submitted to the Office in parent application No.09/928,662, filed August 14, 2001, which is relied upon for an earlier filing date under 35 U.S.C. §120. Thus, copies of these references are not attached. 37 C.F.R. §1.98(d).

Divisional Application of  
Application No. 09/928,662  
Attorney Docket No. UMBC-0004A

- X 5. To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 16-0607 and please credit any excess fees to such deposit account.

Respectfully submitted,  
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Date: December 12, 2003

RAV:knv

<b>LIST OF PRIOR ART CITED BY APPLICANT (PTO-1449)</b>			ATTY. DOCKET NO. <b>UMBC-004</b>		APPLN. SERIAL NO. <b>09/928,662</b>	
			APPLICANT(S) <b>G vind RAO</b>			
			FILING DATE <b>August 14, 2001</b>		GROUP <b>1744</b>	
<b>U.S. PATENT DOCUMENTS</b>						
EXAMINER'S INITIALS	*PATENT NO.	*ISSUE DATE	*INVENTOR NAME		CLASS	SUBCLASS
<b>U.S. PATENT APPLICATION PUBLICATIONS</b>						
	*PATENT APPLN. PUB. NO.	*PUB. DATE	*APPLICANT		CLASS	SUBCLASS
<b>U.S. PATENT APPLICATIONS</b>						
	*APPLN. NO.	*FILING DATE	*INVENTOR		CLASS	SUBCLASS
<b>FOREIGN PATENT DOCUMENTS</b>						
EXAMINER'S INITIALS	PATENT NO.	DATE	COUNTRY		CLASS	SUBCLASS
<b>OTHER ART (Including Author, Title, Date, Pertinent Pages, Publisher, Place of Publication, Etc.)</b>						
	Chang et al., "Steam-Sterilizable, Fluorescence Lifetime-Based Sensing Film for Dissolved Carbon Dioxide", Biotechnol Prog, March-April, 14 (2):326-331 (1998)					
	Bylund et al., "Influence of Scale-Up on the Quality of Recombinant Human Growth Hormone", Biotechnol Bioeng, 69:119-128 (2000)					
	Kostov et al., "Low-Cost Microbioreactor for High-Throughput Bioprocessing", Biotechnol Bioeng, February 5, 72 (3):346-52 (2001)					
	S.B. Bambot et al., "Lifetime-based optical sensing of pH using resonance energy transfer in sol-gel films", Sensors and Actuators B 22 (1994) pages 181-188					
	Sipior et al., "A Lifetime-Based Optical CO <sub>2</sub> Gas Sensor with Blue or Red Excitation and Stokes or Anti-Stokes Detection", Anal Biochem, May 20, 227 (2):309-18 (1995)					
	Gryczynski et al., "Polarization-Based Oxygen Sensor", Analyst, July, 124(7):1041-44 (1999)					
	Bambot et al., "Optical Oxygen Sensor Using Fluorescence Lifetime Measurement", Adv Ep Med Biol, 361:197-205 (1994)					
	Chae et al., "Framework for Online Optimization of Recombinant Protein Expression in High-Cell-Density Escherichia Coli Cultures using GFP-Fusion Monitoring", Biotechnol Bioeng, August 5, 69 (3):275-85 (2000)					
	DeLisa et al., "Monitoring GFP-Operon Fusion Protein Expression during High Cell Density Cultivation of Excherichia Coli using an On-Line Optical Sensor", Biotechnol Bioeng, October 5, 65(1) :54-64 (1999).					
EXAMINER			DATE CONSIDERED			

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.